



Highlands College

OF MONTANA TECH

Montana Tech Highlands College

COURSE SYLLABUS For Fall Machining – MCH*

Semester:	Fall 2016	Credits:	16
Instructor:	Tony Patrick	Office Hours:	By Appointment
Office Phone:	496-3789 – Leave Message, Name and Number		
Pre-requisites:	n/a		
Hours:	Monday thru Thursday 9:00am – 3:00pm		
Location:	Room 155 – Trades & Technical CAD Lab & Room 148 Machine Shop		

Books and Tools:

Mastercam X8 Training Guide
Precision Machining Technology
Machinery's Handbook – Pocket Companion
Machinists' – Ready Reference
See attached Tool List

Course Description:

The following courses will be covered during the Fall Semester: Shop Practices, Blueprint Reading & Interpretation for Machining, Machine Quality Control & Precision Measurement, Machine Shop 1 and CNC1. These courses are designed to give the student an understanding of shop safety, how to interpret blueprints, how to accurately measure a part, how to make a part using manual lathe & mill. Computer Numerically Controlled



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(CNC) will cover: writing programs, machine setup and cutting of parts using the HAAS mills and lathes.

Course Objectives:

Shop Practices:

- Safety
- Following Montana techs / Highlands's college procedures for safety.

Blueprint Reading & Interpretation for Machining:

- How to read a blue print
- How to interpret measurements and tolerances

Machine Quality Control & Precision Measurement:

- How to read a caliper, micrometers (outside & inside)
- How to accurately measure a machined part

Machine Shop 1

- The student will use the above information to safely and accurately produce assigned parts on the manual lathe and mill from assigned blueprints.

CNC1:

- Students will learn how to load raw stock in the CNC machine
- Students will learn how to set X, Y and Z coordinates.
- Students will learn to generate programs using Mastercam.
- Students will learn how to edit the programs using G-Codes and M-Codes.
- Students will produce assigned projects generated from the programs they create.
- Students will make their own fixtures to create the finished assignments as required.

Class Requirements:

All students will be required to pass the following NIMS Credentials:

Measurement, Materials & Safety.

Job Planning, Bench Work & Layout.

Most of the material introduced in this class will likely be new to you therefore attendance is required and expected. Absenteeism is a leading cause of job loss, and college failure. That said, attendance is important, and poor attendance will result in lower grades. The classes in the Machining Technology program are dependent on your participation during both lab, and classroom time. Without explanation, some of the material may be very



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difficult for you to understand. Class time will also be of value in providing you with an opportunity to ask questions. **Keep in mind that class lectures will not be repeated for anyone regardless of the reason for absence.** If you miss class you are still responsible for any material discussed.

Class attendance and participation required.

You will be graded daily any time you come in late or leave early you earn ½ of a day. Every 2 times you are late or leave early is equal to one absence. After 4 absences or equivalent during one semester, a student will be deemed a safety hazard, which will result in being removed from the program. If you do not call in or email, no assignment or test can be made up for that day(s).

Absences will reduce final grade. Example: we meet 10 times during term. A student misses 2 classes. The student will have an 80% attendance. This will be averaged with the sum of all the other grades. If the student gets 70% for other graded work and an 80% attendance, the final grade would be a 75%.

Six (6) absences will result in a one letter grade drop (A to a B, B to a C, etc.)

Classroom Civility:

Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, or demeaning. The instructor has primary responsibility for and control over classroom behavior and maintenance of academic integrity. Some ways to maintain classroom civility follow below.

Instructor's responsibilities to help maintain classroom civility:

Start and end class on time.

Treat all students with courtesy and respect.

Be open to constructive input from students in the course.

Ensure that opportunities to participate are enjoyed by all students in the course.

Student's responsibilities to help maintain classroom civility:

Come to class on time, and refrain from packing up belongings before class ends.

Turn off all electronic devices that might create a disruption in class.

Be quiet and give full respectful attention while either instructor or another student is speaking. When speaking, use courteous, respectful language and keep comments and questions relevant to the topic at hand.



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Horse play, vulgar language and outburst in class will not be tolerated at any time. Repeated violations may subject you to being asked to leave the class and return when you can act responsibly. If you don't won't to comply you may be asked to withdraw from the program.

Cell Phones and other electronic devices:

Use of Cell Phones and other electronic devices will not be allowed during class period.

All Cell Phones will be collected before class and returned at end of day.

THE USE OF DRUGS AND ALCOHOL

Highlands College is a drug-free campus, meaning that the use or selling of any illegal drugs on campus (even if you have a medical marijuana card) is prohibited. Being under the influence of illegal drugs as well as some legal ones can pose a serious risk to the safety of everyone in a welding lab. If drug use is suspected that student will be asked to leave for that day in order to maintain a safe environment. The student will be referred to the Assistant Dean of Student Services for this infraction of the Student Code of Conduct (found in the Student Handbook) and possibly be dismissed from the welding program because of the threat to the safety of others. Smoking is not permitted on Campus.

PLAGIARISM AND ACADEMIC INTEGRITY

300.14 ACADEMIC HONESTY

The integrity of the academic process requires credit be given where credit is due. Accordingly, it is academic misconduct to present the ideas or works of another as one's own work, or to permit another to present one's work without customary and proper acknowledgment of authorship. Students may collaborate with other students only as expressly permitted by the instructor. Students are responsible for the honest completion



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and representation of their work, the appropriate citation of sources and the respect and recognition of others' academic endeavors.

300.42 DESCRIPTIONS AND EXAMPLES

D. Plagiarism

This is presenting the work of another as one's own without proper acknowledgment.

Examples of plagiarism include submitting as one's own work the work of another student, ghost writer or commercial writing service; directly quoting from a source without acknowledgment; paraphrasing or summarizing another's work without acknowledging the source; or using facts, figures, graphs, charts or information without acknowledging the source. Plagiarism may occur orally or in writing and may involve computer programs and files, research designs, distinctive figures of speech, ideas and images or any other information that belongs to another person and is not acknowledged as such. Inadvertent or unintentional misuse or appropriation of another's work (such as relying heavily on source material that is not expressly acknowledged) is still considered plagiarism.

Please see the link below for more information and the entire policy. http://www.msugf.edu/about/PoliciesProcedures/300/300_STUDENT_CONDUCT_AND_GRIEVANCE_002.pdf

Anyone caught cheating will be awarded a zero for that assignment or task up to dismissal from the program.



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Exams and Assignments:

Class Assignments (with due dates)
Projects (instructor assigned)
Attendance
Midterm Exam
Final Project – Instructor’s Choice
Final Exam

Grading Scale:

A - 100 to 90
B - 89 to 80
C - 79 to 70
D - 69 to 60
F - 59 and below
Scores below 70 must schedule meeting with instructor.

Syllabus is subject to change without notice.

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